## *AMENDMENTS TO THE CLAIMS*

Please amend the claims as indicated hereafter (where underlining "_" denotes additions and strikethrough "-" denotes deletions).

### *Claims:*

1.      (Currently Amended) A method for securely storing encrypted programming received at a receiver in a subscriber network, wherein the encrypted programming includes a plurality of ciphertext packets, the method comprising the steps of:

>   receiving from a headend of the subscriber network a first ciphertext packet at the receiver;

>   applying to the first ciphertext packet a first cryptographic algorithm to convert the first ciphertext packet to a second ciphertext packet without first converting the first ciphertext packet received from the headend to a cleartext packet; and

>   applying to the second ciphertext packet a second cryptographic algorithm to convert the second ciphertext packet to a third ciphertext packet without first converting the second ciphertext packet to a cleartext packet, wherein the third ciphertext packet is decryptable with a single decryption block.

2.      (Original)      The method of claim 1, wherein the receiver is remote from the headend and located at a subscriber location; and further including the step of:

>   storing the third ciphertext packet at the subscriber location.

3.      (Original)      The method of claim 2, wherein the third ciphertext packet is stored in a

device external to the receiver.


4.      (Original)      The method of claim 2, wherein the third ciphertext packet is stored in an

internal storage device of the receiver.


5.      (Original)      The method of claim 1, wherein the third ciphertext packet corresponds to

a cleartext packet that has been encrypted by a 3DES algorithm.


6.      (Original)      The method of claim 1, wherein the first ciphertext packet includes

encrypted content of a program distributed by the subscriber network.


7.      (Original)      The method of claim 1, further including the step of:

        applying a third cryptographic algorithm to the third ciphertext packet to convert the third

                ciphertext packet to a cleartext packet.


8.      (Original)      The method of claim 1, further including the step of:

        converting the cleartext packet from a first format to a second format.


9.      (Original)      The method of claim 8, wherein the first format is an MPEG format.

10.    (Original)    The method of claim 9, wherein the third cryptographic algorithm is a

3DES algorithm.


11.    (Original)    The method of claim 1, wherein the first cryptographic algorithm is a DES

algorithm.


12.    (Original)    The method of claim 1, wherein the second cryptographic algorithm is a

DES algorithm.


13.    (Original)    The method of claim 1, wherein the act of converting the first ciphertext

packet to the second ciphertext packet removes a layer of encryption from the first ciphertext

packet.


14.    (Original)     The method of claim 1, wherein the act of converting the second

ciphertext packet to the third ciphertext packet adds a layer of encryption to the second

ciphertext packet.


15.    (Original)    The method of claim 1, further including the step of:

        receiving a first key from the headend, wherein the first key is applied to the first

            ciphertext packet with the first cryptographic algorithm.

16.     (Original)      The method of claim 1, further including the step of:

generating an encryption key at the receiver, wherein the encryption key is applied to the

second ciphertext packet with the second cryptographic algorithm.

17.     (Original)      The method of claim 16, further including the steps of:

receiving at least one key associated with the first ciphertext packet; and

applying a third cryptographic algorithm with the at least one key and the encrypt key to

convert the third ciphertext packet to a cleartext packet.

18.     (Original)      The method of claim 17, wherein the third cryptographic algorithm is a

3DES algorithm.

19.     (Original)      The method of claim 1, wherein the act of converting the first ciphertext

packet to the second ciphertext packet adds a layer of encryption to the first ciphertext packet.

20.     (Original)      The method of claim 1, further including the step of:

generating at least one encryption key at the receiver, wherein the at least one encryption

key is applied to the first ciphertext packet with the first cryptographic algorithm

and the second ciphertext packet with the second cryptographic algorithm.

21.    (Original)    The method of claim 20, wherein the at least one encryption key is a first

encryption key and a second encryption key, the first encryption key is applied to the first

ciphertext packet with the first cryptographic algorithm, and the second encryption key is applied

to the second ciphertext packet with the second cryptographic algorithm.

22.    (Original)    The method of claim 20, further including the steps of:

   receiving a decrypt key associated with the first ciphertext packet; and

   applying a third cryptographic algorithm with the decrypt key and the at least one encrypt

   key to convert the third ciphertext packet to a cleartext packet.

23.    (Original)    The method of claim 22, wherein the third cryptographic algorithm is a

3DES algorithm.

24.     (Currently Amended) A method for securely providing in a subscriber network encrypted

programming, which is received at a receiver at a subscriber location, the encrypted

programming includes a plurality of ciphertext packets, and wherein the subscriber network

includes a headend for distributing the encrypted programming and a plurality of receivers

including the receiver at the subscriber location, at the headend the method comprising the steps

of:

applying to a cleartext packet a first cryptographic algorithm to convert the cleartext

packet to a first ciphertext packet;

transmitting the first ciphertext packet to the receiver; and

at the receiver the method comprising the steps of:

receiving the first ciphertext packet;

applying to the first ciphertext packet a second cryptographic algorithm to convert the

first ciphertext packet to a second ciphertext packet without first converting the

first ciphertext packet received from the headend to a cleartext packet; and

applying to the second ciphertext packet a third cryptographic algorithm to convert the

second ciphertext packet to a third ciphertext packet without first converting the

second ciphertext packet to a cleartext packet, wherein the third ciphertext packet

is decryptable with a single decryption block.


25.     (Original)     The method of claim 24, wherein the act of converting the first ciphertext

packet to the second ciphertext packet removes a layer of encryption from the first ciphertext

packet.

26.     (Original)      The method of claim 24, wherein the act of converting the second

ciphertext packet to the third ciphertext packet adds a layer of encryption to the second

ciphertext packet.


27.     (Original)      The method of claim 24, at the receiver, further including the step of:

storing the third ciphertext packet.


28.     (Original)      The method of claim 24, at the receiver, further including the step of:

generating at least one encryption key, wherein the at least one encryption key is used

with the third cryptographic algorithm.


29.     (Original)      The method of claim 28, wherein the at least one encryption key is a first

encryption key and a second encryption key, the first encryption key is used with the second

cryptographic algorithm, and the second encryption key is used with the third cryptographic

algorithm.


30.     (Original)      The method of claim 24, wherein the first cryptographic algorithm is a

3DES algorithm.


31.     (Original)       The method of claim 24, wherein the second and third cryptographic

algorithms are the same.

32.     (Original)     The method of claim 31, wherein the second cryptographic algorithm is a DES algorithm.


33.     (Original)     The method of claim 31, wherein the first cryptographic algorithm is the same as the second and third cryptographic algorithms.


34.     (Original)     The method of claim 33, wherein the first cryptographic algorithm is a DES algorithm.


35.     (Original)     The method of claim 24, wherein the third ciphertext packet corresponds to a cleartext packet that has been encrypted by a 3DES cryptographic algorithm.


36.     (Original)     The method of claim 24, at the receiver, further including the steps of:

storing the third ciphertext packet;

retrieving the third ciphertext packet from storage; and

applying to the third ciphertext packet a fourth cryptographic algorithm to convert the

third ciphertext packet to a cleartext packet.


37.     (Original)     The method of claim 36, wherein the fourth cryptographic algorithm is a 3DES cryptographic algorithm.

38.    (Currently Amended) A receiver in a subscriber network that receives encrypted

programming, from a headend of the subscriber network, wherein the encrypted programming

includes a plurality of ciphertext packets, the receiver comprising:

　　　　an input port adapted to receive a first ciphertext packet of the encrypted programming;

　　　　a key generator adapted to generate a plurality of encryption keys; and

　　　　a cryptographic device in communication with the input port and the key generator, the

　　　　　　cryptographic device adapted to apply a cryptographic algorithm at least twice

　　　　　　using at least one encryption key and the first ciphertext packet to convert the

　　　　　　ciphertext packet to a second ciphertext packet without first converting the first

　　　　　　ciphertext packet received from the headend to a cleartext packet, wherein the

　　　　　　second ciphertext packet is decryptable with a single decryption block.


39.    (Original)    The receiver of claim 38, further including:

　　　　a storage device in communication with the cryptographic device, the storage device

　　　　　　adapted to store the second ciphertext packet and the at least one encryption key.


40.    (Original)    The receiver of claim 38, further including:

　　　　an output port in communication with the cryptographic device, the output port adapted

　　　　　　to interface with an external storage device.

41.    (Original)    The receiver of claim 38, wherein the input port receives a decryption key, the first application of the cryptographic algorithm to the first ciphertext packet includes using the decryption key to convert the first ciphertext packet to a third ciphertext packet, and the second application of the cryptographic algorithm includes using the at least one encryption key and the third ciphertext packet to convert the third ciphertext packet to the second ciphertext packet.

42.    (Original)    The receiver of claim 41, wherein the cryptographic algorithm includes a first function and a second function, the first application of the cryptographic algorithm includes using the first function, and the second application of the cryptographic algorithm includes using the second function.

43.    (Original)    The receiver of claim 41, wherein the cryptographic algorithm is a DES algorithm.

44.    (Original)    The receiver of claim 38, wherein the at least one encryption key includes a first key, a second key, and the first application of the cryptographic algorithm to the first ciphertext packet includes using the first key to convert the first ciphertext packet to a third ciphertext packet, and the second application of the cryptographic algorithm includes using the second key and the third ciphertext packet to convert the third ciphertext packet to the second ciphertext packet.

45.    (Original)    The receiver of claim 44, wherein the cryptographic algorithm includes a first function and a second function, the first application of the cryptographic algorithm includes using the first function, and the second application of the cryptographic algorithm includes using the second function.

46.    (Original)    The receiver of claim 44, wherein the cryptographic algorithm is a DES algorithm.

47.    (Original)    The receiver of claim 38, wherein the first ciphertext packet corresponds to a cleartext packet encrypted by a DES algorithm.

48.    (Original)    The receiver of claim 38, wherein the input port is adapted to receive at least one decryption key, and the cryptographic device is adapted to use the at least one decryption key with the at least one encryption key, and a second cryptographic algorithm to convert the second ciphertext packet to a cleartext packet.

49.    (Original)    The receiver of claim 48, wherein the second cryptographic algorithm is a 3DES algorithm.

50.    (Original)    The receiver of claim 38, wherein the cryptographic device includes a first cryptographic device and a second cryptographic device, the first cryptographic device is adapted to apply the cryptographic algorithm to the first ciphertext packet to convert the first ciphertext packet to a third ciphertext packet, and the second cryptographic device adapted to apply the cryptographic algorithm to the third ciphertext packet to convert the third ciphertext packet to the second ciphertext packet.

51.    (Original)    The receiver of claim 50, wherein the second cryptographic device is adapted to apply a second cryptographic algorithm to the third ciphertext packet to convert the third ciphertext packet to a cleartext packet.

52.    (Original)    The receiver of claim 51, wherein the second cryptographic algorithm is a 3DES algorithm.

53.    (Original)    The receiver of claim 51, further including:
        a converter adapted to convert the cleartext packet from a first format to a second format.

54.    (Original)    The receiver of claim 53, wherein the first format is an MPEG format.

55.     (Currently Amended) A method for securely storing encrypted programming received at

a receiver in a subscriber network, wherein the encrypted programming includes a plurality of

ciphertext packets, the method comprising the steps of:

>   receiving a first ciphertext packet having multiple layers of encryption thereon at the
>
>   >   receiver; and
>
>   applying a cryptographic algorithm to the first ciphertext packet to convert the first
>
>   >   ciphertext packet to a second ciphertext packet without first converting the first
>   >
>   >   ciphertext packet received from the headend to a cleartext packet, wherein the
>   >
>   >   second ciphertext packet is decryptable with a single decryption block.

56.     (Original)     The method of claim 55, wherein the second ciphertext packet

corresponds to a cleartext packet that was encrypted using a second cryptographic algorithm.

57.     (Original)     The method of claim 56, wherein the second cryptographic algorithm is a

3DES cryptographic algorithm.

58.     (Original)     The method of claim 55, wherein the multiple layers of an encryption

include a first layer and a second layer.

59.     (Original)     The method of claim 58, wherein the first layer of encryption corresponds

to applying a second cryptographic algorithm to convert a cleartext packet to a third ciphertext

packet.

60.     (Original)     The method of claim 59, wherein the second cryptographic algorithm is a

DES algorithm.


61.     (Original)     The method of claim 59, wherein the second layer of encryption

corresponds to applying a third cryptographic algorithm to convert the third ciphertext packet to

the first ciphertext packet.


62.     (Original)     The method of claim 61, wherein the third cryptographic algorithm is a

DES algorithm.


63.     (Original)     The method of claim 55, further including the steps of:

        applying a second cryptographic algorithm to the second ciphertext packet to convert the

                second ciphertext packet to a cleartext packet.


64.     (Original)     The method of claim 63, wherein the second cryptographic algorithm is a

3DES algorithm.


65.     (Original)     The method of claim 63, further including the step of:

        converting the cleartext packet from a first format to a second format.


66.     (Original)     The method of claim 65, wherein the first format is an MPEG format.

67.    (Original)    The method of claim 55, further including the step of:

receiving multiple keys, each key associated with at least one layer of encryption of the

first ciphertext packet.

68.    (Original)    The method of claim 55, further including the step of:

generating a key for use with the cryptographic algorithm.

69.    (Currently Amended) A method for providing a subscriber of a subscriber network with a

program, the subscriber network including a headend with a plurality of receivers coupled

thereto, at the headend the method comprising the steps of:

receiving a first ciphertext packet;

applying a cryptographic algorithm with a key to the first ciphertext packet to convert the

first ciphertext packet to a second ciphertext packet without first converting the

first ciphertext packet received ~~from~~ at the headend to a cleartext packet;

transmitting the second ciphertext packet; and

at the receiver the method comprising the steps of:

receiving the second ciphertext packet having multiple layers of encryption thereon; and

applying a second cryptographic algorithm to the second ciphertext packet to convert the

second ciphertext packet to a third ciphertext packet without first converting the

second ciphertext packet to a cleartext packet, wherein the third ciphertext packet

is decryptable with a single decryption block.

70.     (Original)     The method of claim 69, wherein the first ciphertext packet corresponds to a cleartext packet that was encrypted by a third cryptographic algorithm using a second key.

71.     (Original)     The method of claim 70, wherein the first, the second and the third cryptographic algorithms are the same.

72.     (Original)     The method of claim 71, wherein the first cryptographic algorithm is a DES algorithm.

73.     (Original)     The method of claim 69, wherein the third ciphertext packet corresponds to a cleartext packet that was encrypted using a forth cryptographic algorithm.

74.     (Original)     The method of claim 73, wherein the fourth cryptographic algorithm is a 3DES cryptographic algorithm.

75.     (Original)     The method of claim 69, at the receiver, further including the step of:

        applying a third cryptographic algorithm to the third ciphertext packet to convert the third

                ciphertext packet to a cleartext packet.

76.     (Original)     The method of claim 75, wherein the third cryptographic algorithm is a 3DES algorithm.

77.     (Currently Amended) The method for securely providing a subscriber of a subscriber

network with an encrypted program, wherein the encrypted program includes a plurality of

ciphertext packets, the method comprising the steps of:

>   receiving a first ciphertext packet of the encrypted program;

>   applying a cryptographic algorithm with a key to the first ciphertext packet to convert the

>> first ciphertext packet to a second ciphertext packet without first converting the

>> first ciphertext packet received from the headend to a cleartext packet, wherein

>> the second ciphertext packet is decryptable with a single decryption block; and

>   transmitting the second ciphertext packet.


78.     (Original)     The method of claim 77, wherein the first ciphertext packet corresponds to

a cleartext packet that was encrypted by a second cryptographic algorithm using a second key.


79.     (Original)     The method of claim 78, wherein the first and second cryptographic

algorithms are the same.


80.     (Original)     The method of claim 79, wherein the first cryptographic algorithm is a

DES algorithm.


81.     (Original)     The method of claim 77, further including the step of:

>   receiving a second key, wherein the second key is used with a second cryptographic

>> algorithm to convert the first ciphertext packet to cleartext.

82.    (Original)    The method of claim 81, further including the step of:

transmitting the first and second key.

83    (Currently Amended)  A receiver in a subscriber network that receives encrypted

programming from a headend of the subscriber network, wherein the encrypted programming

includes a plurality of ciphertext packets, the receiver comprising:

> a port adapted to receive a first ciphertext packet of the encrypted programming, the first
>
> > ciphertext packet corresponding to a cleartext packet having multiple layers of
> >
> > encryption thereon;
>
> a key generator adapted to generate an encryption key; and
>
> a cryptographic device in communication with the input port and the key generator, the
>
> > cryptographic device adapted to apply a cryptographic algorithm using the
> >
> > encryption key to the first ciphertext packet to convert the ciphertext packet to a
> >
> > second ciphertext packet without first converting the first ciphertext packet
> >
> > received from the headend to a cleartext packet, wherein the second ciphertext
> >
> > packet is decryptable with a single decryption block.

84.    (Original)    The receiver of claim 83, further including:

> a storage device in communication with the cryptographic device, the storage device
>
> > adapted to store the second ciphertext packet and the encryption key.

85.     (Original)     The receiver of claim 83, further including:

an output port in communication with the cryptographic device, the output port adapted

to interface with external storage devices.


86.     (Original)     The receiver of claim 83, wherein the cryptographic algorithm is a DES

algorithm.


87.     (Original)     The receiver of claim 83, wherein the second ciphertext packet

corresponds to a cleartext packet encrypted by a 3DES algorithm.


88.     (Original)     The receiver of claim 83, wherein the input port is adapted to receive at

least one decryption key, and the cryptographic device is adapted to use the at least one

decryption key with the encryption key and a second cryptographic algorithm to convert the

second ciphertext packet to the corresponding cleartext packet.


89.     (Original)     The receiver of claim 88, wherein the second cryptographic algorithm is a

3DES algorithm.


90.     (Original)     The receiver of claim 88, further including:

a converter adapted to convert the cleartext packet from a first format to a second format.


91.     (Original)     The receiver of claim 90, wherein the first format is an MPEG format.

92.    (Currently Amended) A method for securely storing encrypted programming received at a receiver in a subscriber television network, wherein the encrypted programming includes a plurality of ciphertext packets, the method comprising the steps of:

receiving from a headend of the subscriber network a first ciphertext packet at the

receiver, wherein the first ciphertext packet has a single layer of encryption

thereon that was applied by a first cryptographic algorithm using a first key;

generating a second and third key;

applying to the first ciphertext packet a second cryptographic algorithm with the second

key to convert the first ciphertext packet to a second ciphertext packet having a

second layer of encryption thereon without first converting the first ciphertext

packet received from the headend to a cleartext packet; and

applying to the second ciphertext packet a third cryptographic algorithm with the third

key to convert the second ciphertext packet to a third ciphertext packet having a

third layer of encryption thereon without first converting the second ciphertext

packet to a cleartext packet, wherein the third ciphertext packet is decryptable

with a single decryption block.


93.    (Original)    The method of claim 92, wherein the receiver is remote from the headend and located at a subscriber location; and further including the step of:

storing the third ciphertext packet and the second and third keys at the subscriber

location.

94.     (Original)      The method of claim 92, further including the steps of:

receiving the first key from the headend; and

storing the third ciphertext packet and the first, second and third keys at the subscriber

      location.


95.     (Original)      The method of claim 94, further including the steps of:

retrieving the third ciphertext packet and the first, second and third keys from storage;

      and

decrypting the third ciphertext packet by applying a fourth cryptographic algorithm to

      third ciphertext packet with the first, second and third keys.


96.     (Currently Amended) The method of claim 95, wherein the first, second and third

cryptographic algorithms are DES and the fourth cryptographic algorithm is a 3DES algorithm.

~~third ciphertext packet corresponds to a cleartext packet that has been encrypted by a 3DES~~

~~algorithm.~~


97.     (Original)      The method of claim 92, wherein the first ciphertext packet includes

encrypted content of a program distributed by the subscriber cable television network.


98.     (Original)      The method of claim 92, wherein the second and third cryptographic

algorithms are DES algorithms.

99.     (Original)     The method of claim 92, wherein the third ciphertext packet corresponds

to a cleartext packet that has been encrypted by a 3DES algorithm.


100.    (Currently Amended) A receiver in a subscriber cable television network that receives

encrypted programming, from a headend of the subscriber cable television network, wherein the

encrypted programming includes a plurality of ciphertext packets, the receiver comprising:

> an input port adapted to receive a first ciphertext of the encrypted programming, wherein
>
> > the first ciphertext packet has a single layer of encryption thereon that was
> >
> > applied by a first cryptographic algorithm using a first key;
>
> a key generator adapted to generate a plurality of keys including a second key and a third
>
> > key;
>
> a cryptographic device in communication with the input port and the key generator, the
>
> > cryptographic device adapted to convert the first ciphertext packet to a second
> >
> > ciphertext packet, without first converting the first ciphertext packet received
> >
> > from the headend to a cleartext packet, using a second cryptographic algorithm
> >
> > and the second key and thereafter to convert the second ciphertext packet to a
> >
> > third ciphertext packet, without first converting the second ciphertext packet to a
> >
> > cleartext packet, using a third cryptographic algorithm and the third key, wherein
> >
> > the third ciphertext packet is decryptable with a single decryption block; and
>
> a storage device in communication with the cryptographic device adapted to store the
>
> > third ciphertext packet and the second and third keys.

101.    (Original)    The receiver of claim 100, wherein the input port receives the first key,

and the cryptographic device is further adapted to decrypt the third ciphertext packet by applying

a fourth cryptographic algorithm to the third ciphertext packet with the first, second and third

keys thereby converting the third ciphertext packet to a cleartext packet.


102.    (Original)    The receiver of claim 101, wherein the first, second and third

cryptographic algorithms are a DES algorithm and the fourth cryptographic algorithm is a 3DES

algorithm.


103.    (Original)    The receiver of claim 101, further including:

        a converter in communication with the cryptographic device adapted to convert the

            cleartext packet from a first format to a second format.


104.    (Original)    The receiver of claim 103, wherein the first format is an MPEG format.

105.    (Currently Amended) A method for securely storing encrypted programming received at a receiver in a subscriber television network, wherein the encrypted programming includes a plurality of ciphertext packets, the method comprising the steps of:

>   receiving from a headend of the subscriber network a first ciphertext packet at the
>>   receiver and a first key, a second key and a third key, wherein the first ciphertext packet has three layers of encryption thereon that were applied by a first cryptographic algorithm using the first key, the second key and the third key;
>
>   generating a fourth key;
>
>   applying to the first ciphertext packet a second cryptographic algorithm with the first key
>>   to convert the first ciphertext packet to a second ciphertext packet having two layers of encryption thereon without first converting the first ciphertext packet received from the headend to a cleartext packet; and
>
>   applying to the second ciphertext packet a third cryptographic algorithm with the fourth
>>   key to convert the second ciphertext packet to a third ciphertext packet having a third layer of encryption thereon without first converting the second ciphertext packet to a cleartext packet, wherein the third ciphertext packet is decryptable with a single decryption block.

106.    (Original)    The method of claim 105, wherein the receiver is remote from the headend and located at a subscriber location; and further including the step of:

>   storing the third ciphertext packet and the second, third and fourth keys at the subscriber
>>   location.

107.    (Original)    The method of claim 106, further including the steps of:

retrieving the third ciphertext packet and the second, third and fourth keys from storage;

and

decrypting the third ciphertext packet by applying a fourth cryptographic algorithm to

third ciphertext packet with the second, third and fourth keys, thereby converting

the third ciphertext packet to a cleartext packet.


108.    (Original)    The method of claim 107, further including the step of:

converting the cleartext packet from a first format to a second format.


109.    (Original)    The method of claim 108, wherein the first format is an MPEG format.

110.    (Currently Amended)   A receiver in a subscriber cable television network that receives

encrypted programming, from a headend of the subscriber cable television network, wherein the

encrypted programming includes a plurality of ciphertext packets, the receiver comprising:

>   an input port adapted to receive a first key, a second key, a third key and a first ciphertext

>>    of the encrypted programming, wherein the first ciphertext packet has three layers

>>    of encryption thereon that were applied by a first cryptographic algorithm using

>>    the first key, a second key and a third key;

>   a key generator adapted to generate a fourth key;

>   a cryptographic device in communication with the input port and the key generator, the

>>    cryptographic device adapted to convert the first ciphertext packet to a second

>>    ciphertext packet using a second cryptographic algorithm and the first key

>>    without first converting the first ciphertext packet received from the headend to a

>>    cleartext packet and thereafter to convert the second ciphertext packet to a third

>>    ciphertext packet using a third cryptographic algorithm and the fourth key without

>>    first converting the second ciphertext packet to a cleartext packet, wherein the

>>    third ciphertext packet is decryptable with a single decryption block; and

>   a storage device in communication with the cryptographic device adapted to store the

>>    third ciphertext packet and the second, third and fourth keys.

111.    (Original)    The receiver of claim 110, wherein the cryptographic device is further

adapted to decrypt the third ciphertext packet by applying a fourth cryptographic algorithm to the

third ciphertext packet with the second, third and fourth keys thereby converting the third

ciphertext packet to a cleartext packet.


112.    (Original)    The receiver of claim 111, wherein the first, second and third

cryptographic algorithms are a DES algorithm and the fourth cryptographic algorithm is a 3DES

algorithm.


113.    (Original)    The receiver of claim 111, further including:

        a converter in communication with the cryptographic device adapted to convert the

                cleartext packet from a first format to a second format.


114.    (Original)    The receiver of claim 113, wherein the first format is an MPEG format.

115.    (Currently Amended) A method for securely storing encrypted programming received at a receiver in a subscriber television network, wherein the encrypted programming includes a plurality of ciphertext packets, the method comprising the steps of:

> receiving from a headend of the subscriber network a first ciphertext packet at the
>
>> receiver and a first key and a second key, wherein the first ciphertext packet has
>>
>> two layers of encryption thereon that were applied by a first cryptographic
>>
>> algorithm using the first key and a second cryptographic algorithm using the
>>
>> second key;
>
> generating a third key; and
>
> applying to the first ciphertext packet a third cryptographic algorithm with the third key
>
>> to convert the first ciphertext packet to a second ciphertext packet having three
>>
>> layers of encryption thereon without first converting the first ciphertext packet
>>
>> received from the headend to a cleartext packet, wherein the second ciphertext
>>
>> packet is decryptable with a single decryption block.


116.    (Original)    The method of claim 115, wherein the receiver is remote from the headend and located at a subscriber location; and further including the step of:

> storing the third ciphertext packet and the first, second and third keys at the subscriber
>
>> location.

117.    (Original)    The method of claim 116, further including the steps of:

retrieving the third ciphertext packet and the first, second and third keys from storage;

and

decrypting the third ciphertext packet by applying a fourth cryptographic algorithm to

third ciphertext packet with the first, second and third keys, thereby converting

the third ciphertext packet to a cleartext packet.


118.    (Original)    The method of claim 117, further including the step of:

converting the cleartext packet from a first format to a second format.


119.    (Original)    The method of claim 118, wherein the first format is an MPEG format.

120.    (Currently Amended) A receiver in a subscriber cable television network that receives

encrypted programming, from a headend of the subscriber cable television network, wherein the

encrypted programming includes a plurality of ciphertext packets, the receiver comprising:

> an input port adapted to receive a first key and a second key and a first ciphertext of the
>
>> encrypted programming, wherein the first ciphertext packet has two layers of
>>
>> encryption thereon that were applied by a first cryptographic algorithm using the
>>
>> first key and a second cryptographic algorithm using the second key;
>
> a key generator adapted to generate a third key;
>
> a cryptographic device in communication with the input port and the key generator, the
>
>> cryptographic device adapted to convert the first ciphertext packet to a second
>>
>> ciphertext packet using a third cryptographic algorithm and the third key without
>>
>> first converting the first ciphertext packet received from the headend to a cleartext
>>
>> packet, wherein the second ciphertext packet is decryptable with a single
>>
>> decryption block; and
>
> a storage device in communication with the cryptographic device adapted to store the
>
>> ~~third~~ second ciphertext packet and the first, second and third keys.


121.    (Original)      The receiver of claim 120, wherein the cryptographic device is further

adapted to decrypt the third ciphertext packet by applying a fourth cryptographic algorithm to the

third ciphertext packet with the first, second and third keys thereby converting the third

ciphertext packet to a cleartext packet.

122.    (Original)    The receiver of claim 121, wherein the first, second and third

cryptographic algorithms are a DES algorithm and the fourth cryptographic algorithm is a 3DES

algorithm.


123.    (Original)    The receiver of claim 121, further including:

        a converter in communication with the cryptographic device adapted to convert the

            cleartext packet from a first format to a second format.


124.    (Original)    The receiver of claim 123, wherein the first format is an MPEG format.